

CLAIMS

What is claimed is:

1. A method of processing an action within a schedule and having a latency attribute associated therewith, comprising:
initiating the action;
comparing the latency attribute with a latency threshold; and
selectively storing data associated with a schedule in a storage medium based on the latency comparison.
2. The method of claim 1, further comprising creating an association between the stored data and a signal.
3. The method of claim 2, further comprising suspending execution of the schedule based on the latency comparison.
4. The method of claim 3, further comprising selectively de-allocating resources associated with the schedule after suspending execution of the schedule.
5. The method of claim 3, further comprising selectively resuming execution of the schedule based on the signal.
6. The method of claim 4, further comprising selectively allocating computer system resources for execution of the schedule based on the signal, and selectively resuming execution of the schedule based on the signal.
7. The method of claim 1, further comprising adjusting the latency attribute according to a variable.
8. The method of claim 7, wherein the variable is related to the actual latency for completion of the action.

9. The method of claim 1, wherein the data comprises schedule state information.

10. The method of claim 1, further comprising adjusting the latency threshold based on a variable.

11. A method of executing a schedule, the schedule comprising a schedule state, at least one transaction having an action associated therewith, the action having a latency attribute associated therewith, the method comprising:

initiating the action according to the schedule;

comparing the latency attribute with a latency threshold; and

selectively storing the schedule state in a storage medium based on the latency comparison.

12. The method of claim 11, further comprising creating an association between the stored schedule state and a signal.

13. The method of claim 12, further comprising suspending execution of the schedule based on the latency comparison.

14. The method of claim 13, further comprising selectively de-allocating resources associated with the schedule after storing the schedule state in the storage medium.

15. The method of claim 13, further comprising selectively resuming execution of the schedule based on the signal.

16. The method of claim 15, further comprising selectively allocating computer system resources for execution of the schedule based on the signal, and selectively resuming execution of the schedule based on the signal.

17. The method of claim 11, wherein the schedule includes a plurality of actions and at least one of the actions has an associated latency attribute.

18. The method of claim 17, wherein the latency attribute represents an estimated latency for completion of the associated action.

19. The method of claim 17, further comprising adjusting at least one of the latency attributes according to a variable.

20. The method of claim 19, wherein the variable is related to an actual latency for completion of the associated action.

21. The method of claim 17, wherein the latency attributes have a class associated therewith, and wherein the class indicates a grouping of actions.

22. The method of claim 21, further comprising providing a plurality of latency thresholds, wherein each latency threshold has a class associated therewith, and selectively comparing a latency attribute with a latency threshold having the same class upon initiating the action associated with the latency attribute.

23. The method of claim 22, further comprising adjusting at least one of the latency thresholds based on a variable.

24. The method of claim 23, wherein the variable is related to system resource utilization.

25. The method of claim 11, further comprising adjusting the latency threshold based on a variable.

26. The method of claim 11, further comprising selectively storing the schedule state in a database schema based on the latency comparison.

27. The method of claim 11, wherein the schedule state comprises a schedule location and active data.

28. The method of claim 11, wherein the action has a compensation parameter associated therewith, further comprising selectively compensating the action based on the compensation parameter, a transaction boundary within the schedule, and a state associated with another action within the schedule.

29. The method of claim 11, further comprising selectively compensating a first action according to a transaction boundary within the schedule and a compensation parameter associated with the first action, based on abortion of a second action within the schedule.

30. A method of executing a schedule, the schedule comprising a schedule state, at least one transaction with an action associated therewith, the method comprising:

initializing an action within the schedule;

comparing a latency attribute associated with the action and a latency threshold;

executing the action if the latency attribute does not exceed the latency threshold; and

dehydrating the schedule if the latency attribute exceeds the latency threshold.

31. The method of claim 30, wherein dehydrating the schedule further comprises storing the schedule state to a storage medium, creating a proxy between the stored schedule state and a message, suspending execution of the schedule pending the expected action, and restoring the schedule and resuming execution of the schedule based on receipt of the message.

32. A computer-readable medium having computer-executable instructions for:

initiating an action having a latency attribute associated therewith;
comparing the latency attribute with a latency threshold; and
storing data associated with a schedule in a storage medium based on the latency comparison.

33. The computer-readable medium of claim 32, having further computer-executable instructions for creating an association between the stored data and a signal.

34. The computer-readable medium of claim 33, having further computer-executable instructions for suspending execution of the schedule based on the latency comparison.

35. The computer-readable medium of claim 34, having further computer-executable instructions for selectively de-allocating resources associated with the schedule after suspending execution of the schedule.

36. The computer-readable medium of claim 34, having further computer-executable instructions for selectively resuming execution of the schedule based on the signal.

37. The computer-readable medium of claim 35, having further computer-executable instructions for selectively allocating resources to execution of the schedule based on the signal, and selectively resuming execution of the schedule based on the signal.

38. The computer-readable medium of claim 32, wherein the action further has a compensation parameter associated therewith, having further computer-

executable instructions for selectively compensating the action based on the compensation parameter, a transaction boundary within the schedule, and a state associated with another action within the schedule.

39. The computer-readable medium of claim 32, having further computer-executable instructions for selectively compensating a first action according to a transaction boundary within the schedule and a compensation parameter associated with the first action, based on abortion of a second action within the schedule.

40. A method of executing a transaction having an associated transaction boundary and an action, wherein the action has an action state and a compensation parameter associated therewith, the method comprising:

recognizing a transaction boundary associated with the transaction; and
compensating the action according to the transaction boundary, the compensation parameter, and a status of another action within the transaction boundary.

41. The method of claim 40, further comprising selectively compensating at least a first action according to the transaction boundary and the compensation parameter based on abortion of a second action.

42. The method of claim 41, further comprising selectively compensating at least a first action according to the transaction boundary and the compensation parameter upon abortion of a second action, and further according to the action state associated with the first action.

43. The method of claim 42, further comprising selectively compensating at least a first action according to the transaction boundary and the compensation parameter upon abortion of a second action, if the first action has committed.

44. The method of claim 43, wherein the compensation step further

comprises instantiating at least one object.

45. The method of claim 43, wherein the compensation step further comprises sending a message.

46. A computer-readable medium having computer-executable instructions for:

executing a schedule, the schedule comprising a schedule state, at least one action, and at least one transaction with an associated transaction boundary, the action including an action state and a compensation parameter associated therewith;

recognizing the transaction boundary within the schedule; and

selectively compensating at least one action within the schedule according to a transaction boundary within the schedule, a compensation parameter associated with the action, and a status of another action with the schedule.

47. The computer-readable medium of claim 46, having further computer-executable instructions for selectively compensating at least a first action according to the transaction boundary and a compensation parameter associated with the first action based on abortion of a second action.

48. The computer-readable medium of claim 47, having further computer-executable instructions for selectively compensating the at least a first action according to the transaction boundary and a compensation parameter associated with the first action upon abortion of a second action, and further according to the action state associated with the first action.

49. The computer-readable medium of claim 48, having further computer-executable instructions for selectively compensating the at least a first action according to the transaction boundary and the compensation parameter associated with the first action upon abortion of a second action, if the first action has committed.

50. The computer-readable medium of claim 46, wherein the at least one action includes a latency attribute, and having further computer-executable instructions for selectively storing the schedule state to a storage medium based on a comparison of the latency attribute with a latency threshold.

51. In the execution of a schedule in a computer system, the schedule comprising a schedule state, an action with an associated action state, and at least one transaction with a transaction boundary, a compensation parameter, a compensation routine, and a transaction state associated therewith, a method of selectively compensating the transaction during the execution of a schedule, comprising:

determining the action state of an action;

if the action state is aborted, determining the relationship of the action and the transaction based on a transaction boundary;

if the action state is aborted, and if the action and transaction are related according to the transaction boundary, determining the transaction state of the transaction; and

if the action state is aborted, and if the action and the transaction are related according to the transaction boundary, and if the transaction state is committed, performing an operation according to the compensation routine associated with the transaction.

52. In the execution of a schedule in a computer system, the schedule comprising a schedule state, first and second transactions with a associated transaction boundaries, transaction states, compensation parameters, and compensation routines, and first and second actions with a associated action states, compensation parameters, and compensation routines, a method of selectively compensating a first action or transaction during the execution of a schedule, comprising:

determining the state of one of the second action and the second transaction;

if the state of one of the second action and second transaction is aborted,

determining the relationship of the first action and transaction with the second action and transaction based on the transaction boundary;

if the state of one of the second action and second transaction is aborted, and if one of the first action and transaction are related to one of the second action and transaction according to the transaction boundary, determining the state of one of the first action and transaction; and

if the state of one of the second action and second transaction is aborted, and if one of the first action and transaction are related to one of the second action and transaction according to the transaction boundary, and if the state of one of the first action and transaction is committed, performing an operation according to the compensation routine associated with one of the first action and transaction.